

Claims

1. An apparatus for aligning an item (2) that can be deformed easily, at least in the region of the outer lower edge, such as a stack of items comprising in particular flat structures made of a flexible material, such as paper or the like, on a transport substrate (1), such as a pallet, at least one aligning device (5) that can be displaced in the direction of the item (2) and the transport substrate (1) being provided to align the item on the transport substrate (1), characterized in that at least the subregion of at least one aligning device (5) which comes into contact with the lower region of the item (2) projecting laterally beyond the outer contour of the transport substrate (1) during the alignment of the item (2) on the transport substrate (1) is assigned a stabilizing device (8) which prevents the item (2) being deflected in the direction of the transport substrate (1).
2. The apparatus as claimed in claim 1, characterized in that the stabilizing device (8) includes a layer which inhibits slipping.
3. The apparatus as claimed in claim 1 or 2, characterized in that the stabilizing device (8) includes a compliant element.
4. The apparatus as claimed in claim 3, characterized in that the element is made of rubber.
5. The apparatus as claimed in one of claims 1 to 5, characterized in that the stabilizing device (8) comprises a supporting device for supporting the item (2).

6. The apparatus as claimed in one of claims 1 to 5,
characterized in that the stabilizing device (8)
has a supporting surface adjoining the contact
surface of the transport substrate (1) laterally
5 at a short distance, at least during the
alignment, and at least approximately aligned with
the contact surface.
7. The apparatus as claimed in one of claims 1 to 6,
10 characterized in that the aligning device (5) is
formed in many parts, at least in an upper and a
lower segment (13, 14), in relation to the height
of the item (2), and the stabilizing device (8) is
provided at least on the lower segment (14).
- 15 8. The apparatus as claimed in claim 7, characterized
in that the adjacent edges (15, 16) have mutually
at least approximately corresponding edge curves
with projecting and set-back subregions and in
20 particular are formed in the shape of a wave and
interengaging.
9. A method for aligning an item (2) that can be
deformed easily, at least in the region of the
25 outer lower edge, such as a stack of items
comprising in particular flat structures made of a
flexible material, such as paper or the like, on a
transport substrate (1), such as a pallet, at
least one aligning device (5) that can be
30 displaced in the direction of the item (2) and the
transport substrate (1) being provided to align
the item on the transport substrate (1),
characterized in that a deflection of the lower
region of the item (2) projecting laterally beyond
35 the outer contour of the transport substrate (1)
is prevented by a stabilizing device (8) which is
assigned to at least the subregion of the aligning
device (5) which comes into contact with the
region of the item (2) projecting laterally beyond

the outer contour of the transport substrate (1) during the alignment of the item (2) on the transport substrate (1).

- 5 10. The method as claimed in claim 9, characterized in that, before the alignment of the item (2) on the transport substrate (1), the transport substrate (1) is its part aligned in relation to at least one aligning device (5).
- 10 11. The method as claimed in claim 9 or 10, characterized in that, in order to reduce friction between the underside of the item (2) and the contact surface of the transport substrate (1), a
- 15 friction-reducing layer can be provided.
12. The method as claimed in claim 11, characterized in that a thin sheet is laid on the transport substrate (1) as a layer before the loading of the
- 20 transport substrate (1) with the item (2).
13. The method as claimed in claim 11 or 12, characterized in that a film, in particular an oil film, is applied to the underside of the item (2)
- 25 as a layer.